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AUTHOR Schenck, John Phillip
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ABSTRACT

A review and analysis of programs and strategies which help program planners and curriculum developers eliminate sex bias in vocational education are presented in this state-of-the-art paper. It is noted that vocational educators are only now beginning to report in any volume on the subject of sex fairness and that there is little doctoral research in this area. The following topics and issues are discussed: sex fairness in vocational education as a warranted assumption, impact on careers of sex-role stereotyping and sex bias in vocational education, forces promoting sex fairness in vocational education (including socialization, instructional materials, vocational interest inventories, world of employment), and forces promoting the eradication of sex unfairness in vocational education (including legislation). Recommendations are made to maximize reduction of sex unfairness in vocational education. These include the following: enforce appropriate laws, provide overt support, take affirmative action, provide new models for vocational aspirations, require inservice education for vocational educators, re-examine the principles of vocational education, and disseminate information. (TA)

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ED149189

SEX FAIRNESS IN VOCATIONAL EDUCATION

written by

John Phillip Schenck
University of South Dakota at Springfield

The ERIC Clearinghouse on Career Education
The Center for Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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FOREWORD

The Educational Resources Information Center on Career Education (ERIC/CE) is one of sixteen clearinghouses in a nationwide information system that is funded by the National Institute of Education. The scope of work for ERIC/CE includes the fields of adult-continuing, career, and vocational-technical education. One of the functions of the Clearinghouse is to interpret the literature that is related to each of these fields. This paper on sex fairness in vocational education should be of particular interest to vocational and technical education teachers, administrators, curriculum developers, and program planners.

The profession is indebted to John P. Schenck, University of South Dakota at Springfield for his scholarship in the preparation of this paper. Recognition is also due Louise Vetter, The Center for Vocational Education, The Ohio State University, and Faith L. Justice, The Center for Vocational Education, the Ohio State University, for their critical review of the manuscript prior to its final revision and publication. Wesley E. Budke, Vocational-Technical Specialist at the ERIC Clearinghouse on Career Education, coordinated the publication's development. Madelon Plaisted and Jo-Ann Cherry edited the paper for final publication.

Robert E. Taylor
Executive Director
The Center for Vocational Education

ABSTRACT

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INTRODUCTION

Vocational education has been caught up in the net of increasing opportunity in all our social institutions. There is great demand that persons be admitted to vocational preparation on the basis of actual ability and interest rather than on the basis of gender and/or interests and abilities traditionally associated with being male or female. The necessary changes will not be made easily, but they will be made. As will be made clear in this report, vocational education is not totally at fault for the sex bias and sex-role stereotyping in vocational education, but it will be responsible for eliminating such bias.

This report reviews, summarizes, analyzes, and synthesizes significant literature on sex bias and sex-role stereotyping in and as it relates to vocational education. The report should be viewed as a state-of-the-discipline paper and should be useful as a benchmark for efforts to provide equal opportunity in vocational education.

A paper of this type has numerous limitations. Because of the laws and legislation involved, some of the sources of sex bias and sex-role stereotyping are now in the process of being corrected. Much of the literature bearing on sex fairness in vocational education is peripheral. Vocational educators are only now beginning to report in any volume on the subject, and there is little doctoral research in this area.

Sex-role stereotyping and sex bias in vocational education are out of date. Indeed, those factors "that might influence a person to limit--or might cause others to limit--his or her considerations of career solely on the basis of gender" (National Institute of Education, 1974) are now officially worthless in the currency of vocational education. Even so, there remains an extended body of vocational educators who are skeptical or deny totally that sex-role stereotyping and bias have ever been a part of vocational education. To those unbelievers, attributing the differential occupational

preparation of women and men and a subsequent sexual division of labor to something other than what is right and proper makes no sense. To paraphrase Rebecca, et al. (1976), for those whose consciousness has not been raised, one might as well fuss about why there are no dogs in Congress as about why men and women are prepared for and enter different occupations.

Some vocational educators do not accept sex-role stereotyping and bias in vocational education. However, saying that it exists does not make it so; therefore, it is necessary to present evidence to make this paper credible.

SEX FAIRNESS IN VOCATIONAL EDUCATION AS A WARRANTED ASSUMPTION

It is reasonable to assume that if there were no gender-based factors influencing career selection and preparation, males and females would be enrolled in the various service areas in roughly the same proportion in which they are represented in total vocational education enrollments. However, as evidenced by Table 1., distributive education is the only service area that approaches the expected proportions. The table shows that female enrollment in vocational education declined from 55.4 percent to 48.3 percent between 1972 and 1975, primarily because of low female enrollments in industrial arts and volunteer firefighter programs, two special programs added since 1972. On the other hand, male enrollments in consumer and homemaking and office occupations has increased since 1972. Whether the latter indicates a new trend in male enrollment in vocational education cannot be verified by the meager data available. In any event, the data show that females enrolled in vocational education are concentrated in health, consumer and homemaking, occupational home economics, and office.

Steele (1974) found that out of 128 OE instructional wage-earning programs, females were the majority in fifteen of seventeen health programs, six of six occupational home economics programs, and eight of ten office programs. Males were the majority in eight of eight agricultural, fourteen of twenty distributive education, twenty-two of twenty-two technical, and forty of forty-five trade and industrial education programs.

At the postsecondary level, Steiger and Cooper (1975) showed that in 1971 enrollment in dental hygiene classes was 99.3 percent female, while enrollment in electronics and machine tool technology courses

TABLE 1. ENROLLMENT DISTRIBUTION BY SEX, FISCAL YEARS 1972 AND 1975

	1975			1972
	Total	Female	Percent Female	Percent Female
Total Enrollment*	13,372,896	6,464,315	48.3	55.4
Agriculture**	873,649	79,948	9.2	5.4
Distributive	701,825	300,196	42.8	45.3
Health	507,955	364,278	71.7	84.7
Consumer & Homemaking	2,886,474	2,364,108	81.9	92.1
Occupational Home Economics	329,377	241,103	73.2	86.1
Office	2,108,180	1,460,391	69.3	76.4
Technical	341,062	36,455	10.7	9.8
Trades & Industry	2,267,881	285,486	12.6	11.7
Special Programs	1,790,245	478,395	26.7	44.7

*Total enrollment, less Delaware, Illinois, Maine, Rhode Island, South Carolina, American Samoa, Guam, and Trust Territory.

**Less California in occupational programs. About 10 percent of the States have not reported enrollments by sex for FY 1975.

Table adapted from *A Study of the Extent of Sex Discrimination and Sex Stereotyping in Vocational Education Programs and Assessment of Methods to Reduce or Eliminate Such Inequities.* A work statement accompanying Request for Proposal No. 77-48, issued by DHEW's Office of Education.

was 99.7 percent male. In classes dealing with data processing, keypunch trainees were 85 percent female, but only 27 percent females were studying computer programming and none were studying maintenance of data processing equipment. In the health and paramedical field, female enrollment in courses on medical record technologies was 96 percent. Only 33 percent of those studying institutional management were women. The percentages were generally the same for natural science technologies and business and commercial technologies.

Data collected at twelve MDTA skill centers by Walker, et al. (1974) showed that retraining institutions tend to perpetuate the male/female dichotomy of initial occupational preparation. These data point up that: (1) female trainees are generally being trained in the same occupation as their last full-time job; (2) there is little enrollment of trainees in courses traditionally reserved for the opposite sex. When such enrollment does occur, it is more likely to be a male in a female course rather than the opposite. The findings of the evaluation suggest that employment retraining for women is aimed mainly at upgrading already acquired skills and provides little opportunity for training in alternative occupations. Further, there is evidence of stereotyping in the training placement of female enrollees, both on the part of personnel involved in the retraining program and from the female trainees themselves.

Viewing the data in Table 1., as the baseline, it is immediately apparent that females and males are enrolled in nearly all service areas of vocational education in numbers severely disproportionate to their contributions to total enrollment. This skewed enrollment among service areas is best explained by factors that influence students to limit, or cause others to limit, the consideration of a career solely on the basis of gender. Females limit themselves or are limited by others to health, home economics, and office occupations preparation. Males limit themselves or are limited by others to agricultural, technical, and trade and industrial occupations preparation. These conclusions confirm what has been obvious for years to even casual observers of vocational education: females concentrate in one set of vocational education areas and males in another set.

IMPACT ON CAREERS OF SEX-ROLE STEREOTYPING AND SEX BIAS IN VOCATIONAL EDUCATION

On the face of it, sex-role stereotyped and sex-biased vocational education appears harmless and seems to work well. But beneath the surface it violates the spirit if not the letter of vocational education. One of the more insidious impacts on careers of sex-role stereotyping and sex bias is its contribution to sustaining a system of virtually inherited occupations, a division of labor on the basis of gender. While not nearly so rigid as the caste, class, and estates systems, it is still a system that discourages people from preparing for occupations for which they have the aptitude and ability.

Another impact that occurs when sex bias and sex-role stereotyping intrude into the occupational preparation process is the elimination of what Stebbins, et al. (1975) called "sex fairness," which is the absence of differential career treatment on the basis of irrelevant gender differences. Lack of sex fairness has several side effects. It limits the individual's career options. Obviously, if a set of careers is not available to an individual because of her or his gender, then the individual will not or cannot opt for a career in that set. Another side effect of sex unfairness is that it limits vertical mobility. Promotion may not be possible if it is to a position traditionally exclusive to one sex or the other. At a purely economic level, the most powerful impact is that of relegating many female vocational education graduates to the ranks of the working poor. Money (wages and salaries) is differentially distributed among traditionally male and female occupations, with the least money going to occupations filled by women.

Trecker (1974) took the position that, to a certain extent, publicly supported vocational education programs help maintain low pay rates in female occupations. The few occupations traditionally available for female students assure that there will be a large population of females trained for a narrow range of occupations. Salaries in such occupations are low because of intense competition for available jobs. "Women's work" is cheap because women are concentrated in too few occupations.

The relation between income and traditional occupations is succinctly presented in Table 2., (Lecht, et al. 1976). The table is doubly revealing because it also associates income with median years of schooling completed. In the three office fields listed (bookkeeper, secretaries, typists), all with 1970 earnings of less than $7000, the

TABLE 2. MEDIAN YEARS OF SCHOOLING COMPLETED IN 1970, AND ESTIMATED EARNINGS IN 1970 AND 1985, OCCUPATIONS INCLUDED IN STUDY EMPLOYING LARGEST NUMBER OF MALES AND LARGEST NUMBER OF FEMALES

Occupation	Median Years of Schooling Completed in 1970	Median Earnings of Full-Year Workers		Percent Change, 1970-1985
		1970	Projected 1985	
OCCUPATIONS EMPLOYING LARGEST NUMBER OF MALES:				
Auto mechanics	10.5	$ 9,070	$13,270	46%
Carpenters	9.7	9,720	14,390	48
Deliverymen	11.7	9,060	12,720	40
Farm owners and tenants	10.5	7,780	15,910	104
Foremen	12.7	12,320	19,160	56
Heavy equipment mechanics	11.1	10,300	15,070	46
Managers and administrators, n.e.c.	13.8	16,770	26,040	55
Salesclerks, retail trade	12.7	6,470	9,480	47
Sales representatives, wholesale	13.8	13,690	21,030	54
Truck drivers	9.0	9,640	16,160	68
OCCUPATIONS EMPLOYING LARGEST NUMBER OF FEMALES:				
Bookkeepers	13.7	6,530	9,600	47
Cooks	9.1	5,470	8,570	57
Hairdressers and cosmetologists	13.0	5,770	8,650	50
Nurses aides	11.8	4,890	6,940	42
Practical nurses	13.2	5,870	8,910	52
Salesclerks, retail trade	12.7	6,470	9,480	47
Secretaries	13.9	6,860	10,100	47
Sewers and stitchers	8.5	4,880	6,970	43
Registered nurses	14.2	8,090	11,970	48
Typists	13.7	6,070	8,890	46
All U.S. Occupations	12.4	9,945	15,260	53

In 1973 dollars.

predominantly female work force had close to two years of school beyond the secondary level. Practical nurses and nurses aides (health occupations) earned even less. Full-year workers earned less than $8000 in all but one area listed in the female group. In the male group, this low-earning occurred in only two cases. Further, between 1970 and 1985 the earning differentials for both groups are expected to rise. The educational achievement of women and men in all occupations in the nation in 1970, as represented by the median number of years of schooling completed, was identical--12.4 years for both. However, the economic returns for educational attainment for women have been consistently less.

Home economics occupations are not easily identified because they are commonly subsumed under some such omnibus rubric as "service." However, income levels for some home economics occupations may be inferred from information provided by Naherny and Witt (1975). Their examination of the *Dictionary of Occupational Titles* revealed that derivatives of homemaking are treated as forms of custodial work, apparently requiring only the most fundamental of interpersonal skills. For example, foster mother and homemaker are, by occupational division and skill-complexity code, shown as domestic service jobs equal to maid. Day care occupations were combined under the title, nursery school teacher, and given the same skill-complexity code as babysitter. Many private and public employers use the DOT's skill-complexity code to establish wage levels. Further, at least sixty-five government agencies rely on DOT data to expend training funds and to formulate employment programs, policies, and procedures. Unfortunately, the lower a job skill code, the more difficult it is to obtain federal training funds for a significant length of time.

The *Employment and Training Report of the President* (1976)--formerly the *Manpower Report of the President*--shows that women's share of white-collar jobs, in fact of every category of nonfarm industry except operatives, has increased since 1900. A good part of the increase, however, was in the relatively low-paying clerical and sales fields, which helps explain the fact that the average earnings of year-round full-time women workers are less than three-fifths those of men.

Increased education generally means that a woman will work, but the relationship between education, occupation, and earnings for women cannot be reconciled with the expected financial worth of education and training. Men earn high returns on education and training investments, both in status and income. Working women as a group are penalized both in earnings and job security (Steiger and Cooper, 1975).

It is clear that formal vocational education, by omission or commission, perpetuates sex-role stereotyping and sex bias. The effect of this unfairness on both females and males is to limit their career options and mobility. An additional and devastating effect on females is that of locking them into low-income jobs; low income because there are so many qualified persons competing for a narrow range of occupations. Having said that, it is necessary to note that even though sex-role stereotyping was completely eliminated from vocational education, other forces may continue to influence males and females to prepare only for traditional occupations. That being the case, any reasonable

measure of progress should not rely too heavily on the number of individuals who use vocational education to prepare for nontraditional occupations, but rather, on how much vocational education does to encourage it and make it possible.

FORCES PROMOTING SEX FAIRNESS IN VOCATIONAL EDUCATION

A variety of forces internal and external to vocational education encourages the stereotyping that results in a sexual division of occupational preparation. Vocational education itself cannot be held blameless, but to the extent that the institution of education is expected to reflect the values of society at large, it is unfair to assign total responsibility for defects in vocational education to vocational education alone.

SOCIALIZATION

Probably no influencer of gender-based occupational selection and preparation has been more thoroughly examined than the socialization process. Indeed, until only recently, society's pressures and expectations have been so strong that women and men have not selected jobs traditionally assumed to be held by the other sex. Career expectations have been so effectively expressed that large numbers of women seldom consider preparing for occupations in which men are in the majority (Ellis, 1971).

According to Kimmel (1974), from the earliest years of a female's development, the message of socialization is to be feminine. A critical part of being feminine is to avoid developing qualities that society assumes to be masculine: competency, intellectual development, aggressiveness, ambition, leadership qualities, and competitiveness. Socialization encourages women to succeed, but only in traditional careers for women: motherhood, teaching, nursing, clerical jobs, and other service occupations.

Family childrearing practices reflect cultural expectations and in a sense provide a life style or "life script" for children and adults (National Education Association, 1973). Sex-role behaviors are among the first learning of children and the evidence suggests that female/male distinctions are apparent to children as early as age two (Kagan, 1969). Brown (1958) and Ward (1969) asserted that preschool children

know their sex and the adult expectations for that sex. As the youngster grows older, sex roles become more stereotyped and restrictive (Stein, et al., 1969). Male children exhibit an increased sensitivity to feminine behavior and try to avoid it as they grow older (Hartely, et al., 1964). By the fourth grade, girls' perceptions of occupations open to them are limited to four: teacher, nurse, secretary, or mother. Boys of the same age perceive their occupational options to be considerably less restricted (O'Hara, 1962). A decline in career aspirations has been found in high school age girls. This decline was related to their feelings that male classmates disapproved of a female's displaying her intelligence (Hawley, 1971). Barnett (1973) noted that the range of occupations considered by girls is not only restricted but that girls at all ages between 9 and 17 select occupations of lower status than those chosen by boys.

A powerful part of the socialization process for females is what Russo (1976) termed the "motherhood mandate." The chief reason why women are kept in the home is to bear and rear children. Motherhood is a woman's reason for being. Visible role models play a part in the acquisition of sex-role stereotypes related to fertility. For the preschool child, there is limited access to female role models other than mothers. In industrially sophisticated societies, advanced training, education, or experience is needed to acquire jobs that might be attractive alternatives to motherhood. But many young females do not actively seek such education, training, or experience because they perceive their adult role to be that of mother only. The potentially irrevocable impact of such behavior is not appreciated by some teenagers.

The educational system contributes to and continues the socialization process. Bruner (1966) asserted that girls in the first grade who learn to control fidgeting are rewarded for excelling in feminine values. As a consequence, it is often difficult to motivate girls to move beyond these orderly virtues later in life. The basic values of early grades may be a reflection of the feminine role in society: cautious rather than daring, controlled by lady-like politeness.

Grade school boys have positive feelings about being male; they are more assertive and confident. Conversely, girls are not especially enthusiastic about being female. They are less confident about their accomplishments, their popularity, and their general adequacy (Minuchin, 1966).

Briggs (1974) claimed that young women tend to confuse femininity with the notion of romance and glamour. Because they are at an age of dating and courting, they are not prepared to give serious consideration

to a large proportion of apprenticeable trades. Those girls who show any interest in apprenticeable occupations concentrate on those considered appropriate for a lady: cosmetologist, florist, or drafter.

Parsons, et al. (1976) presented a general paradigm of the development and expression of sex-role behavior in college women (see Figure 1.). Cultural norms "A" provide the background against which the individual's choices are evaluated. Each culture has its own set of sex-role appropriate behaviors which are accepted as fact. Current situational factors "D" are operating to provide or not provide support to females who might consider a nontraditional occupation. Through the process of socialization "B" women acquire a set of attitudes and beliefs "C" and choices and behaviors "E" which are consistent with the sex roles that they are expected to assume. A sex-role belief system works in at least two ways to restrict female life styles: (1) women may never consider roles other than the traditional ones of wife and mother; (2) even if a woman chooses to pursue a career, nonconscious internalization of traditional values will inhibit the drive needed for career success.

From a study that attempted to determine the dynamics underlying differences between women who have accepted the concept of limited female capacity in a male-oriented career world and those who have not, Karman (1973) located several distinguishing characteristics in upperclass college women. Among these characteristics of women selecting nontraditional careers were holding more liberal attitudes toward the role of women in society, having mothers who had achieved a higher level of education, and expressing a strong liking for math and science.

Erickson, et al. (1974) attempted to learn whether traditional sex-role ideologies still predominate and to find out the career and educational aspiration level of entering freshman women. Their study identified the following qualities of career salient women, that is, those oriented to career in place of or in addition to home and family:

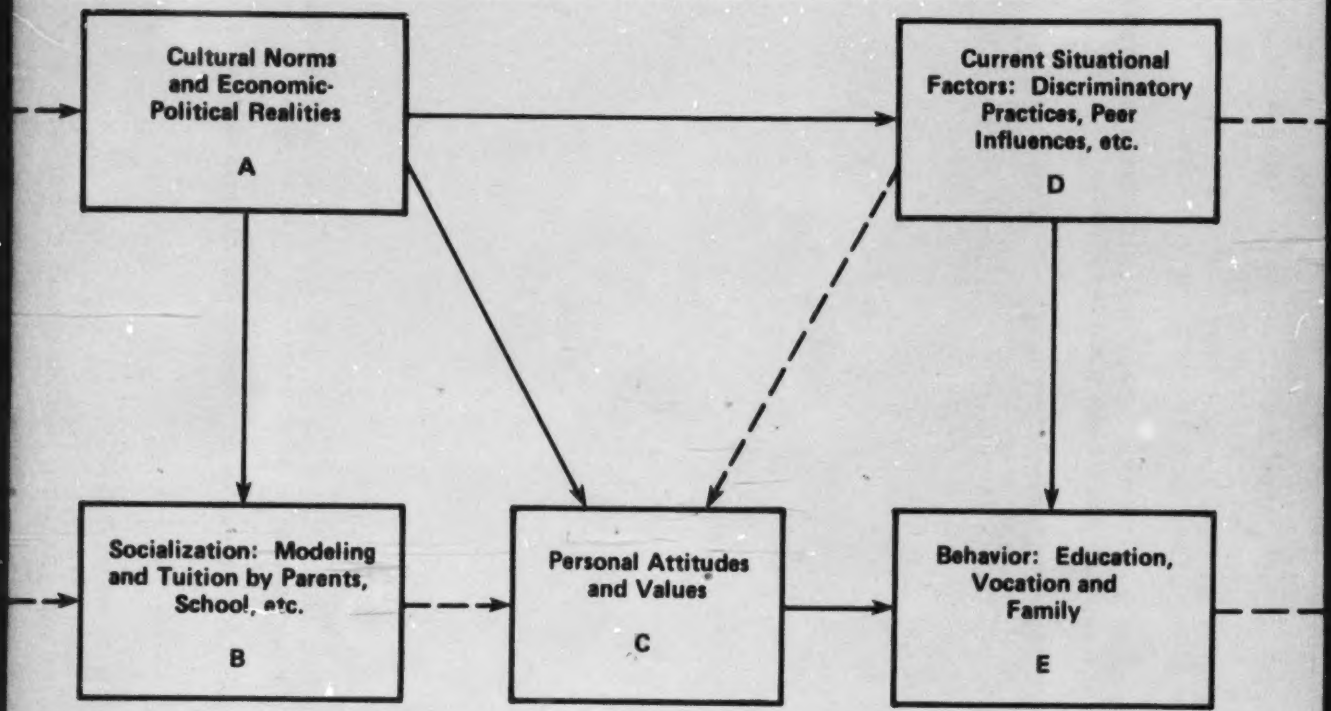
1. They were more urban than rural.

2. They were more likely to have a mother who was employed outside the home.

3. Mothers employed outside the home had positive feelings about employment.

4. Fathers also had such positive feelings, but not as strong as mother's feelings.

FIGURE 1. DEVELOPMENT AND EXPRESSION OF SEX-ROLE RELATED BEHAVIOR IN COLLEGE WOMEN



5. The majority thought that mothers were satisfied with role of homemaker. However, a greater proportion of career salient than noncareer salient thought their mothers were not at all or slightly satisfied with the role of homemaker.

6. Only 5 percent more of the career salient than the noncareer salient wished sometimes that they were men.

Tangri's (1972) study of the determinants of occupational role innovations among college women produced similar conclusions. Role-innovative women do not reject the central female role of wife and mother, but they do expect to postpone marriage longer and have fewer children than traditional females. They do not think of themselves as masculine women. There is no evidence that they plan for nontraditional occupations because of difficulty in attracting the opposite sex. Their commitment to their careers is greater than that of women going into feminine careers. The characteristics discovered to differentiate role-innovated women from traditionals were: autonomy, individualism, and motivation by internally imposed demands to perform to capacity. The role-innovative women also expressed more doubt about their ability to succeed and about identity.

Falk, et al. (1974) identified critical contingencies which may affect the occupational choice and status attainment of women.

1. Marriage plans--age of aspired marriage and status of intended spouse.

2. Fertility plans--age at which to begin child-bearing and number of children desired.

3. Residential plans--mobile or stable.

4. Mother's and father's education and occupations.

5. Differential influence of parents as significant others.

6. Family finances.

7. Presence of male siblings.

8. Projected occupational persona (traditional male or female).

9. Presence of discrimination laws, and so forth.

10. Peer significant others as either modelers or definers.

11. Anticipated husband's occupational expectations for his wife.

12. Internal motivation (satisfying instrumental or expressive models).

13. Desire for a labor market working career.

14. Perceived occupational structure (seeing all jobs as possibilities or a restrictive range of jobs).

Sarvas (1976) surveyed female faculty and administrators in four institutional types--area vocational school, community college, comprehensive high school, and postsecondary proprietary school--to identify their perceptions of female roles, career aspirations, and career possibilities. Over 85 percent of 2585 female faculty and administrators in each of the four institution types agreed with the following statements:

1. It is fine for a woman to work if her children are adequately cared for.

2. Women can live in productive harmony with men filling complementary and supplementary roles.

3. Women have as much need to achieve as men.

4. Women who want full equality should be prepared to accept equal responsibility.

5. A coeducational faculty provides a healthy atmosphere.

The strongest disagreement by both groups was expressed with the following statements:

1. Career women play down feminine appearance to be taken seriously.

2. Women in supervisory positions have difficulty dealing with males in subordinate positions.

3. A woman's first responsibility is to be a feminine companion of men and a mother.

4. A woman's professional career should be subservient to her husband's.

Basualdo (1977) also studied the similarities and differences in perceptions of female vocational faculty members as seen by themselves

and their vocational education directors; these faculty members were teaching only in comprehensive high schools. The majority of the faculty members agreed that their professional careers should be subservient to their husband's. It seemed that although the female vocational faculty members' aspirations are higher than that perceived by the directors, the females still view their careers as secondary to their husbands'.

Harris (1973), discussing a study by David Gottlieb, reported that 82 percent of 1860 graduates of five Pennsylvania colleges believe that, in general, the physical characteristics of women make them unqualified for some types of work generally available to men. Moreover, some 24 percent of the women respondents said that they expected to meet sex discrimination in employment.

Moore (1974) collected data from women in four two-year colleges and discovered four principal factors which separately and collectively function to cool women out of a straight forward, unblocked and open pursuit of their career choices and life plans. By "cooling out" is meant the process of letting down hopes gently and unexplosively; deliberate or nondeliberate, conscious or unconscious. The four factors cited are:

1. Parents--opposed or neutral to nontraditional occupations; lack of willingness to finance daughter's education.

2. Counselors--real "coolants" of women's career aspirations.

3. Uncontrollable circumstances--money, competition, being a woman; being a woman permeated the previous factors; femaleness was cited as an obstacle most often by women planning a nontraditional career.

4. Two-year institutions perpetrate, if only passively, sex-stereotyped curricula such as secretarial and child care study while at the same time unconsciously discouraging women from entering male dominated majors.

There is reason, then, to conclude that socialization promotes sex bias and sex-role stereotyping in vocational education in particular and education in general. Darley (1976) asserted that girls are typically discouraged from using whatever skills may be acquired in school and to acquire a new set of skills--housekeeping, child-care, and husband tending. Conversely, boys are usually pushed into using their marketable skills. The socialization process places the female's maternal role above all else and the motherhood mandate becomes a definite piece of effective baggage to be carried

by every young woman in our society. Women who *must* work and cannot immediately heed the motherhood mandate are exempt from society's sanctions because the fact that they work does not imply they have rejected the traditional female role. Women who *choose* to work are violating role expectations and assumed to have warped personalities. A woman who works because she wants to is assumed to be deficient in the womanly qualities that make for good wives and mothers.

INSTRUCTIONAL MATERIALS

A recently recognized force promoting sex-role stereotyping in vocational education is sexism in instructional materials. "In its original sense, *sexism* referred to prejudice against the female sex. In its broader sense, the term now indicates any arbitrary stereotyping of males and females on the basis of their gender." (McGraw-Hill Book Company, n.d.). Sexism in instructional material manifests itself in illustrations, dialogue, examples, language, authors included, problems presented, and the like.

Textbooks carry not only cognitive or academic information to be learned, but also affective information regarding the assumptions, biases, and values of a culture. Females are comparatively invisible, but passive and emotional when they do appear. Males are usually striving and achieving with little family or emotional life or human limitations (McCune, et al., 1975).

Plost, et al. (1974) concluded from their study of the effect of sex of career models on occupational preference of adolescents that students exhibited a significant preference for the occupation of a career model of the same sex as themselves regardless of the substantive content of the occupations described. Further, girls who viewed the presentations expressed preference for occupations depicted by same-sex career models significantly more than did boys. Additionally, both boys and girls rank occupations depicted by male models higher than those depicted by female models in two prestige categories: perceived education requirements and salary possibilities. The evidence indicates that the predominant use of male career models in textbooks and other media used for instruction and counseling can operate to limit the range of girls' vocational choices and aspirations.

O'Donnell (1973) analyzed six primary social studies textbooks from the approved textbook list of a large suburban school district and concluded that there was a definite imbalance in the way that males and females were depicted. The findings in occupations depicted males in 83 percent of the occupations and females

in 17 percent. In the 17 percent, service occupations like housewife, nurse, secretary, teacher, waitress, librarian, and stewardess predominated to reinforce the traditional patterns of female success. Active girls were depicted at home pleasing and helping mothers, fathers, and brothers. Males were never shown in domestic duties such as child care, dishwashing, or home cooking. In well-paid and high-status occupations there were seventy-two males and one female. Men held occupations requiring intellectual ability, athletic capability, mechanical skills, political acumen, strength, bravery, and administrative leadership. In not one picture was there a female principal, physician, scientist, musician, politician, member of the clergy, judge, space program technician, or professional athlete.

From its review of career education materials from 191 commercial publishers and distributors, The Educational Products Information Exchange Institute (1976) found that five times more occupations for males than for females were included in such products. Further, 68 percent of 9,456 illustrations examined showed males only. In audio materials, males were the main narrators in thirty-seven, females in one; female and male teams narrated three.

An analysis of one of California's state adopted elementary reading textbook series by Taylor (1973) showed that many stories do not depict females in positive roles. When females do appear, they are most likely shown in stereotyped roles and are basically uninteresting, emotionally flighty, or ridiculous. Greater prestige is given to the male role, and females are not seen interacting together as are males: boys are more skilled than girls in physical tasks; boys excel in creative activities; females do not enjoy the freedom to inquire, explore, and achieve.

Thetford (1973) reported that from a survey of eleven junior high schools in rural, urban, and suburban New Jersey, it was found that all career fiction about nursing was about female characters; all but one of the books about physicians were about male characters. Further, all but one of the books about pilots had a male major character and all but one book about professional athletes had a major male character. All teachers and librarians were female, and all the military and police officers were male.

In curriculum materials, girls are most often shown as passive individuals dependent on male figures in their lives. They are neat, domestic, and well-behaved persons who are pretty much incompetent when it comes to any kind of activity besides domestic household chores and child care. They are usually not able to do

things that require physical strength or endurance. Most school materials show that a girl's main aim in life is to become a wife and mother. Any career aspirations that a girl might have tend to be for careers which will not conflict with the role of wife and mother (Sullivan Associates, 1972).

Britton (1974) studied junior high and senior high (grades 7-10) materials and found that of a total of 334 stories, 62 percent or 212 were male dominant, while 12 percent or 43 stories were female dominant; of all career roles depicted, 89 percent show a male representative compared to 11 percent showing a female career model. Stereotypes depicted in the materials include: boys--daring, intelligent, ingenious problem solvers, doers, builders, athletes. Boys are usually shown as older and larger than their female siblings or peers. Girls--spectators of life, docile, pleasing, self-effacing, incompetent, inept, and passive. Girls are consistently shown admiring boys while standing by with their dolls or some equivalent prop. Girls are consistently shown ironing, baking and serving cookies, playing house, and helping mother in the kitchen. Quality as well as quantity of career choices favor male characters. Female career role assignments are fewer in number and limited in variety and scope.

Jacobs, et al.(1972) reported that a two-year study of sex-role stereotyping in children's readers by a task force of the National Organization for Women found that the books showed adult males as job holders and fathers, while adult females were jobholders *or* mothers. Mothers in the stories were undistinguished and without interests of their own. Fathers were depicted as well-rounded individuals who do things with the children--help them build things, and solve their problems.

Weitzman, et al. (1975) employed a computer to make an age, sex, race, and activities analysis of characters in elementary school textbooks. Males predominated in all the books with 69 percent of the total characters; females constituted 31 percent. In all series combined, females comprised a third of the illustrations at the second grade level, but only a fifth of the total of the sixth grade level. Boys are shown as skillful and active, girls as passive; boys are shown as intelligent, while girls engage in domestic activities, try on clothes, groom themselves, or shop; girls are affectionate and nurturing, while boys almost never embrace or cry. A few adult women are shown outside the home, but men are portrayed in over 150 occupations.

Language is also a vehicle for stereotyping in instructional materials. O'Donnell (1973) pointed out that women have been

categorized and stereotyped, and our language contributes to the division between the sexes. This sexism in the language shows itself through (1) the structure of the language (via pronouns, certain suffixes, possessives); (2) the lexicon (mankind, doctor, governess); and (3) associations of connotations linked to certain words (frilly, pretty, beautiful all suggest woman, while handsome, suave, brave, suggest man). Much sexism in language is a result of our enculturations: as a result of certain concepts that have been embedded in our subconscious since early childhood, we associate certain words and ideas with only one sex.

Schenck (1976) claimed that the total effect of textbook sexism is to relegate females to an inferior status and to prepare them to accept the notion that their options are circumscribed by their sex. When translated into occupational terms, it means that females are restricted to almost inherited occupations: nursing, homemaking, clerical, and the like. Additionally, sexism lowers the self-esteem of many females by ignoring their individuality, their existence, and their contributions to cultural progress. Textbook sexism manifests itself in several ways:

1. Speciously attributing gender to generic terms.

2. Using masculine terms to generalize about a group that includes females.

3. Depicting or implying that females are limited to certain abilities, traits, emotions, sex roles, activities, or occupations because they are females.

4. Using nonparallel terms when referring to males and females.

5. Consistently ignoring or minimizing the existence of females.

6. Consistently making reference to the male before the female.

7. Using pejorative or girl-watching terms when referring to females.

8. Depicting or implying that females are the property of males.

A very common form of linguistic sex bias is the use of position, job, or occupation titles that refer to gender, for example, charwoman, mailman, metermaid, and draftsman. Granted, until only recently there have been few alternatives, but vocational instructional materials persist with gender-referrant job titles even

though more appropriate alternatives are now available. Unfortunately, gender stereotyping in textbooks is not self-evident, even to the fair minded vocational educator. It is so much a part of our common culture that it goes unrecognized. It is a cultural norm.

VOCATIONAL INTEREST INVENTORIES

While career-interest inventories are supposedly designed to help individuals obtain a long-range focus on their careers, they can restrict individual choices rather than protract them. This can occur because:

1. The client is influenced by years of socialization experiences which lead to a self-imposed restriction of options.

2. The inventory itself offers limited options.

3. The inventory is improperly administered or interpreted (Stebbins, et al., 1975).

Harmon (1973) believed that bias in interest testing occurs if tests are used to encourage an individual to consider, enter, or reject an occupation or type of occupation on the basis of an irrelevant variable, *sex*. In general, the externally referenced inventories, which reflect the current state of the art and have well-established predictive powers, have the most potential for sex bias.

Cole (1973) raised doubts about the use of current inventories with women considering occupations not traditionally associated with women. When the results of inventories focus on women's occupational scales that have been limited to traditional women's jobs, students and counselors may restrict consideration to the occupations presented even though actual options may be much more extensive.

According to Dewey (1974) the sex-role bias reflected in vocational interest inventories has been especially oppressive for women, as well as restrictive for men, and has continued such myths as "women aren't as intelligent as men"; "women have a natural preference for nursing, teaching, home economics and social work"; "women are inclined to be passive and are best suited for tedious, routine, and repetitious work."

Prediger, et al. (n.d.) suggested that interest inventories constructed to predict which persons will prefer or enter a given occupation present unique problems for career counseling. In effect, the basis for such inventories says, "Cindy may have interests like

an engineer and Mike may have interests like a nurse. But few females or males are likely to enter those nontraditional occupations. So let your predictions (and career guidance) take into account the relative numbers of males and females who have entered various occupations in the past. In the long run, you'll have a higher hit rate and your inventory will appear to be more valid." When employed for career counseling, such inventories will reinforce the society's occupational sex-role stereotypes and thus further institutionalize the channeling.

Cole, et al. (1974) believed that interest measurement has become one of those established institutions which requires scrutiny and reexamination of basic tenets. Some new problems have arisen for interest measurements: (1) they have been developed by, for, and about men; (2) interest measurements depend on a relatively stable social situation within which no major changes or breaks in the socialization process occur within an individual's life history or at a period or point in society's history. It is an unanswered question whether the socialization process for girls is as predictive of job satisfaction as is the same process for boys. Girls have not been socialized to examine as wide a range of possible interests as have boys and yet suddenly they have access to the whole range.

Tanney (1974) carried out a search of the literature for studies which would indicate whether sex-role stereotyping (via language) has been examined for its impact on people who take interest measures. A careful survey revealed no empirical data to evaluate the hypothesis that the linguistic structure of items does or does not influence results on career interest inventories. However, conclusions drawn from applied socio-linguistics, social psychology, and clinical psychology strongly support the need for the linguistic aspect of inventories to be examined. The American Psychological Association and National Vocational Guidance Association guidelines for construction of tests also support the need for a series of studies in the interest of insuring unbiased tests.

Medvene, et al. (1973) investigated women's conceptions of the social status of certain occupations and their views on whether those occupations are appropriate for women. The findings of the study indicate that women tend to agree on the prestige value of given occupations but differ on the question of whether certain occupations, particularly those of medium and low status, are appropriate for women. The results of the study refute the position often taken by counselors that most women agree with traditional sex-role stereotypes in occupational roles and that only a small, vocal minority of women see a need for change in the vocational life of women.

Vocational interest inventories are under fire from all directions because of the biases inherent in them, one of which is sex bias. These inventories are generally predicated on a traditional distribution of the sexes among occupations. To the extent that such vocational interest inventories influence selection of occupational training of men and women, they are a force promoting unfairness in vocational education.

WORLD OF EMPLOYMENT

A rationale commonly cited for continuing gender-based vocational education is that there is little likelihood of graduates of programs not traditional to their gender finding employment in jobs not traditional to their gender. After all, a fundamental charge of federal vocational education legislation to vocational education is to provide ready access to vocational training or retraining which is "of high quality, *which is realistic in the light of actual or anticipated opportunities for gainful employment* [emphasis added], and which is suited to their needs, interests, and ability to benefit from such training" (U. S. Congress, 1976). If, the argument continues, graduates of programs not traditional to their gender cannot realistically be expected to find employment, then vocational education has lived up to the letter of the law.

There is reason to believe that more and more employers and unions are at least officially willing to accept men and women into non-traditional occupations. Nevertheless, the world of employment continues to define jobs as suitable or unsuitable for women and men based on stereotypical perceptions. Briggs (1974) reports that respondents to the employer-survey portion of her study of apprenticeships in Wisconsin had mixed feelings about women in craft occupations. More than 25 percent of respondents believed that there were jobs in their establishment that no woman could possibly do. However, 75 percent felt that women were particularly suited for such skilled trades as sewing, upholstery, interior decorating and drafting. More than a third of the respondents felt that these suitable trades required precision and manual dexterity. Over a third of the respondents indicated that they were hesitant to consider women for some apprenticeable trades because working conditions were not suitable for women; such conditions involved long hours or were too "dirty" or "heavy." Among the group of respondents from firms not employing women in the shop, one-third did not know that females were employed doing precision work in other firms, and about one-half were not aware of women in jobs requiring mechanical aptitude, in dirty jobs, in heavy jobs, or in all-weather jobs.

And two-thirds did not know that women were employed in jobs involving dangerously hot materials.

Even though it was at the time no longer legal to advertise jobs as "male" or "female," the Olympus Research Corporation (Walsh and Johnson, 1974) found that sex designations appeared as late as 1972 in the employment opportunities section of the want ads in two large metropolitan newspapers whose job markets were representative of the world of work. Sex designations used such words and phrases as "Girl Friday," "Salesman," "Waitress," "Will be required to keep the men happy," and "Must be attractive."

Gilbreath (1977), in describing four defenses which have been used by employers to justify sex discrimination in employment, also provided evidence that the world of employment still attempts to categorize jobs as for males or for females:

1. Bonafide occupational qualification (BFOQ)--all or substantially all women are believed to be unable to perform safely and efficiently, the duties of the job involved.

2. Bonafide seniority or merit system--women tend to be the last hired and first fired.

3. Business necessity--segregation by sex is necessary to effectively carry out the business purpose it serves and there is available no acceptable alternative policy which better accomplishes the business purpose.

4. Customer preference--customers prefer employees of one sex. In general, the courts have not accepted these defenses, but they continue to be presented.

According to the U. S. Equal Employment Opportunity Commission (1974), some states still have laws or administrative regulations pertaining to employment of females. Among these laws are those that prohibit or restrict the employment of females in certain occupations requiring the lifting or carrying of weights exceeding specified limits, during certain hours of the night, for more than a specified number of hours per day or per week, and for certain periods of time before and after childbirth. While illegal in most cases, such laws remain on the books. Such protective laws, as well as most other practices that segregate the sexes into occupations, are predicated on stereotyped notions of what is appropriate for the sexes. They do not take into account the capacities, preferences, and abilities of individuals.

RETROSPECTION

Enrollment figures show that males and females are enrolled in specific vocational education service areas in numbers out of proportion to total vocational education enrollments. The enrollment proportions are consistent for programs across the nation. Females are found in massive numbers in health, consumer and homemaking, occupational home economics, and office programs; males populate trade and industry, technical, agriculture, and special programs. Distributive education is the only service area that approaches expected proportions. The evidence strongly suggests that the segregation by sex of vocational education service areas is directly attributable to sex-role stereotyping and sex bias, that is, factors that limit considerations of careers solely on the basis of gender.

The impact of sex unfairness on careers shows in a variety of ways, but probably the most powerful impact is on the earning power of females. Wages for occupations for which females traditionally prepare and enter are well below the national median and approach poverty level in many cases. The relationship between education, occupation, and earning for women is tenuous, if it exists at all. Working women as a group are penalized both in earnings and job security.

The socialization process provides a strong set of cues regarding what is gender-appropriate behavior. Appropriate behavior for females includes putting marriage and child rearing before work. Many females do not take advantage of opportunities for vocational preparation when it is available because they assume that their total life will be devoted to domestic activities. The educational system is a powerful socialization force that reinforces affective cues provided at home and also adds some of its own.

Analysis of instructional materials used in the lower grades show that they also carry a message about the sex roles of males and females; this message is a traditional one, with males depicted as active breadwinners and females as passive domestics. There is some evidence to indicate that the sex-role stereotyping of instructional materials does influence young readers' perceptions of gender-appropriate goals and objectives.

Vocational interest inventories are another force that promotes sex-segregated vocational education. Some of the same qualities that make vocational interest inventories valid also make them biased, for example, predicating such validity on the traditional distribution of the sexes among occupations. Vocational interest inventories play a part in many individuals' decision to prepare or not prepare for a particular occupation.

Several forces, internal and external to vocational education, promote the sexual division of occupational preparation. The world of employment and its natural relation to vocational education is one such force. Stereotypical notions of what is appropriate for females, what their capabilities are, and the working conditions suitable to them still intrude into the employment process. Vocational educators assume that if it is difficult for women to find employment in nontraditional occupations, they are better served by preparing for traditional occupations.

I would like to conclude that vocational educators are simply victims of a system they have tried valiantly to change. However, the evidence suggests the contrary. Lewis, et al. (1976) reported that his study could not locate any schools that had specific procedures or programs designed to encourage females to consider entering traditionally male occupations. What it did locate, nationwide, were eleven vocational and comprehensive high schools that had enrolled at least five females in one or more nontraditional courses, but these schools had no program to *encourage* females to enter nontraditional areas. The study found that none of the teachers in the eleven schools encouraged students to consider nontraditional occupations. Teachers were not openly resistant to having females in their classes, but neither were they enthusiastic. Most of the teachers did not consider equal opportunity for females an issue of concern and had little notion of how vocational education could be used to increase job success for nontraditional students. The teachers were steeped in sex-role stereotyping and sex bias. Overall, the teachers saw more positive than negative effects of having females in their courses, but they seldom showed any effort to increase female enrollment.

FORCES PROMOTING THE ERADICATION OF SEX UNFAIRNESS IN VOCATIONAL EDUCATION

At the same time that some forces are promoting sex unfairness in vocational education, there are equally powerful forces trying to eradicate such stereotyping. Motives for such efforts are ethics, cost effectiveness, feminism, counter-productivity, simple justice, and the like.

It is evident from the preceding discussion of forces promoting stereotyping and bias in vocational education that efforts to eliminate it will strike at many traditional values of the population. Other efforts (Equal Rights Amendment) to restructure sex roles have met with bitter opposition. Unfortunately, it cannot be said with any certainty that vocational educators as a group are supportive of efforts to eliminate stereotyping and bias. What is certain is that those who support the status quo agree on what should be; those who agree that change is necessary seldom agree on a coherent model of what should be.

BREAKING THE SOCIALIZATION CYCLE

If it is true that sex-role stereotyping in vocational education is both a partial result of the socialization process and a continuation of it, breaking the socialization cycle will help eradicate such stereotyping and bias. Obviously, one cannot reach into the home and manipulate the part of the social apprenticeship that takes place there, but a good deal can be done by the schools and other social agencies to, for example, provide nontraditional role models, increase the occupational options presented to young people, and point out restrictive attitudes.

Lewis, et al. (1976) recommended that *counselors* need to have unbiased career information, listen to statements they themselves make concerning student career plans, be aware of biases in interest inventories, attend workshops which focus on sexism in education, know that taking nontraditional courses does not lead to special difficulties, have a working knowledge of Title IX, work with the subject area advisory committees,work with counselors from feeder schools, communicate to prospective employers the need to consider both sexes for any particular job. *Teachers* need to attend workshops on sex bias, avoid embarrassing nontraditional students in their classes, know that their expectations

influence students' achievement levels, examine their own attitudes and actions in the classroom, review course material for sexist references, be role models for both sexes, include discussions of sex bias in student activities, discuss stereotyping and bias among themselves, be aware of world-of-employment problems in their own areas, and utilize outside resources to provide information about traditional and nontraditional occupations.

Librarians must oversee the selection and use of literature that reflects nonstereotyped and unbiased career attitudes. Nontraditional *students* can be used as models of success in nontraditional occupations. They need to support each other in nontraditional courses, visit feeder schools to allay concerns of prospective nontraditional students, be evident during tours by prospective students.

Roby (1975) insisted that local policy makers, administrators, and/or program developers can:

1. Develop and implement an affirmative action plan.

2. Examine who is notified of postsecondary vocational programs and extend publicity to women currently not notified.

3. Examine how public relations publicity impresses women and whether it contains sex bias.

4. Develop a wide range of work study experiences for female students.

5. Provide inservice training for staff to inform them of changes in the world of employment.

6. Make teachers aware that refusing students admission to a course is illegal.

7. Actively encourage local employers to have graduates in nontraditional occupations.

8. Assist girls and women in re-evaluating their stereotyping regarding curricula and jobs.

Ellis (1971) believes that newly emerging technologies such as electro-mechanical, bio-medical equipment, laser/electro-optical, nuclear medicine, and noise control and abatement offer promise for both men and women. This is true since most emerging fields

have not been stereotyped as educational and employment opportunities appropriate only for men or women.

Allen (1975) contended that vocational education alone cannot increase the number of men and women enrolling in nontraditional courses, but it can implement a variety of activities to speed the process:

1. A comprehensive recruitment and informational plan should be developed to encourage males and females to enter nontraditional occupations.

2. Home economics programs at all levels should encourage males and females to examine sex-role expectations and their limitations.

3. Vocational educators should incorporate into their courses a regular unit on discrimination in the world of employment.

4. Nontraditional occupations should be suggested to mature women returning to the labor force who are usually less concerned than younger females with the sex appropriateness of an occupation.

A workshop of women in the world of work (Technical Education Research Center, 1974) concluded that vocational education should provide males and females equal access to educational programs and employment opportunities by: a massive recruitment effort, preparing women for long-term employment, mandatory career education for women, integrating vocational classes by sex, implementing competency-based education, using surplus or uncommitted funds to establish "risk" programs, expanding on-the-job training, and so forth.

Smith (1976) reported that the results of the New Pioneer Project are encouraging. The project began in 1974 to eliminate sex stereotyping in vocational education. Three themes ran throughout the planning of the project: lifetime planning for everyone, options for everyone, and the needs of disadvantaged girls. Twenty months after the inception of the project, there are about 1,000 more girls in agriculture (a 20 percent increase), nearly 700 more girls in trades and industrial education. From 1974 to 1975, girls' enrollment in farm production increased from 173 to 554. Bricklaying I, from 16 to 93; carpentry I, from 51 to 187. At the same time, 1,300 more boys entered home economics. Foods and nutrition went from 300 to 571; housing and home furnishings from 42 to 102.

Maher (1976) reviewed a variety of exemplary projects for the elimination of sex bias in vocational education and identified five approaches to solving the problem:

1. Increase career awareness.
2. Recruit women into nontraditional vocational training.
3. Increase commitment and concern of education personnel through conferences.
4. Develop materials for use of students, parents, and community.
5. Review and revise existing materials.

At the adult education level, Koontz (1972) maintained that continuing education holds promise for expanding career options. To do so, though, the following conditions must apply: enrolling on a part-time basis, flexible course hours, short-term courses, counseling services for adult women, financial aid for part-time study, limited residence requirements, removal of age restrictions, liberal transfer of course credits, curriculum geared to adult experiences, credit by exam, refresher courses, reorientation courses, information services, child care facilities, relaxation of time requirements for degree, and job placement assistance.

Women's studies represent a genre of programs that has great potential for interrupting the traditional career socialization process. These programs make it possible for individual participants to raise their level of aspiration and to contribute significantly in traditional and nontraditional career fields. Although the initiation of women's studies is a recent innovation in education, its significance in eliminating sexism and developing women's potential was already anticipated by Thomas A. Edison. He believed that technology would release women's minds from traditional work so that they could be used in broader, more constructive fields (Osborn, 1975).

That women can successfully fill jobs previously considered male jobs is no longer debatable. Koba Associates, Inc. (1976) has prepared a bibliography for the Bureau of Occupational and Adult Education (DHEW/OE) to disseminate information about publications that focus on women's employment in nontraditional fields. The articles cited in the bibliography cover the whole spectrum of nontraditional (for women) occupations.

Briggs' (1974) report of a project in Wisconsin aimed at increasing the number of females in apprenticeable trades provided further evidence that traditional stereotypes and biases can be reduced by reference to fact. An overwhelming majority of employers of women apprentices said that they (women apprentices) had good working relationships with other employees. A large majority thought that the women's on-the-job motivation was equal to or better than other employees', and many employers had recommended training women apprentices. The availability of training funds was probably decisive for

those employers who were not sure about hiring women, since 27 percent of those responding to a mailed questionnaire indicated that there was a direct relationship between their original decision to employ women apprentices and their receiving reimbursement for training cost.

Although some women are successful in nontraditional occupations, it is still difficult to get women into these occupations. The U. S. Department of Labor (1974) has compiled a list of steps for opening the skilled trades to women and of special programs underway to help women enter these trades. The document sets forth examples of what steps *employers* must take; what *employers* can do to better utilize women workers once they have been hired; what *unions* can do; and what *women* can do to accelerate their entry into the skilled trades. The report concludes that employers' and unions' acceptance in attitude and practice of the equal capacity of women to function in the skilled trades and other apprentice-type jobs depends on knowledge, experience, and understanding of equal employment opportunity laws.

Wells (1973) noted that it is time to have as much faith in the promotional potential of women as has traditionally been placed in men. It is evident that women's participation and advancement in the business world can be increased if we abandon the notion that women have potential only in traditionally proven areas of activity. Women who have already made their mark in the business world can help by sharing this observation with colleagues.

NEUTRALIZING SEX UNFAIRNESS IN INSTRUCTIONAL MATERIALS

This action is, at the same time, the most difficult and the easiest to accomplish. The most difficult because mandatory revision of instructional materials is highly questionable from a constitutional viewpoint and inappropriate as well. Title IX does not cover sex stereotyping in textbooks, curriculum material, or library materials (Education Law Center, 1976). However, an untested section of the Education Amendments of 1976 require development of unbiased curriculum materials. Neutralizing such stereotyping and bias in instructional materials is the easiest action because it is readily identifiable and can be dealt with as content.

A variety of guidelines is available. Naiman (1977) provided a list of recommendations subdivided into actions that can be taken by school boards and administrators--for example; developing a policy statement outlining concerns about the elimination of racist and sexist stereotypes

in textbooks and library books--and into support that can be provided by the state--for example, compiling a reference library of bias-free materials for supervisors and teachers.

The Sexism in Textbooks Committee of Women at Scott, Foresman (1972) recommended the following: the actions and achievements of women should be recognized; girls and women should be shown the same respect as males; abilities, traits, interests, and activities should not be assigned on the basis of gender; do not omit or demean women; avoid stereotyped assumptions about the sexes.

The McGraw-Hill Book Company (n.d.), besides offering an extensive set of guidelines for equal treatment of the sexes, reminded us that women, as well as men, have been leaders and heroes, explorers and pioneers, and have made notable contributions to science, medicine, law, business, politics, civics, economics, literature, the arts, sports, and other areas of endeavor. Books dealing with those subjects, as well as general histories, should acknowledge the achievements of women. The fact that women's rights, opportunities, and accomplishments have been limited by the customs and situations of their time should be openly discussed whenever relevant to the topic at hand.

Sullivan Associates (1972) has also compiled guidelines for eliminating sex-role stereotyping. They are divided into the following categories: portrayal of girls, portrayal of boys, portrayal of boys and girls in mixed situations, portrayal of mothers and adult women, portrayal of fathers and adult men, and language and use of words. Guidelines for art and illustrations are also included.

Jacobs, et al. (1972) and the Education Law Center (1976) both provided checklists for evaluating the extent of sex stereotyping and bias in curriculum material. Schenck (1976) included a list of descriptors, definitions, and examples for detecting sexist language in textbooks. Tiedt (1973) provided guidelines for editing periodical literature so that it does not reflect sex-role stereotyping or bias.

Vickers (n.d.) has developed a television program on choosing materials as part of a series in teaching consumer education. The script includes guidelines for evaluating teaching materials for racism and sexism. The Resource Center on Sex Rules in Education (n.d.) has compiled a bibliography of resources for nonsexist education. The Office of Education (n.d.) has let several contracts for developing nonsexist instructional material. One project is titled "Training Materials on Eliminating Sex Role Stereotyping in Vocational Education" and the other, "Guidelines for Non-Sexist Vocational Education Materials."

Perhaps the most ambitious project to date to eliminate irrelevant gender-referent terms is the job title revisions to eliminate sex and age-referent language from the *Dictionary of Occupational Titles* (U. S. Department of Labor, 1975). Nearly 3,500 job titles were revised, including 2,200 base job titles, 130 defined related job titles, 1,100 undefined related job titles, 3 master definition titles, and 60 term titles. Generally, the primary job title revisions include the following type of changes:

1. Age identifying language, for example, boy and girl; "bus boy" was changed to "dining room attendant."

2. Sex stereotyped language, for example, man, woman, lady, and suffixes that denote sex, such as, "__ess." "Public relations man" was changed to "public relations practitioner."

3. Elimination of "master" with the exception of job titles hallowed in legislation and legal agreements; "yard master" was changed to "yard manager."

4. Dual female/male job titles for certain jobs, for example, airline steward and stewardess.

5. Revision of dictionary job titles "foreman" and "draftsman." These two titles have been changed to "supervisor" and "drafter," respectively, in all job titles in which they appear.

6. Revision of dictionary title "salesman." This title has been changed to "sales agent," "sales associate," and "sales representative."

In some cases, sex is a bona fide occupational qualification, for example, leading lady and leading man, and were not revised. In another case, sex of the worker is fixed, for example, masseur and masseuse.

RESTRUCTURING VOCATIONAL INTEREST INVENTORIES

Tanney (1974) concluded that in evaluating the Strong-Campbell Interest Inventory, Kuder Occupational Interest Survey, and Self-Directed Search, it seems apparent that the constructors of the instruments are making alterations to express the conviction that no occupations are reserved for one sex. Assuming the vulnerability of women to this suggestion, no effort seems unreasonable to request

of test constructors within the domain of the linguistic or verbal communications conveyed to the test taker.

Verheyden-Hilliard (1974) stated that makers and publishers are not responsible for biases and misconceptions that test takers and test administrators bring with them. But interest inventories can be enriched with information providing a new view of the mature woman which will help the counselor and the woman deal with their own problems of bias and self-concept. For the instrument to have real usefulness, simple sex fairness in the matter of language, items, and so on, followed by benign neglect of the crucial effect of socialization will not do the job. Affirmative action in the way of instructional and interpretative material plus follow-up information is most needed.

Birk (1974) made several suggestions to minimize errors and misrepresentations in the interpretation of interest inventory results. Among these suggestions were:

Instruction manuals

1. Address the problems of occupational stereotyping.
2. Given comparable qualifications, all jobs are potentially available to persons of either sex.
3. Dispel the myths of traditional careers.
4. Avoid masculine bias.
5. Show ways that inventories may limit options and then provide solutions to this problem.

Interpretive material

1. Provide case studies of both men and women in nontraditional jobs.
2. Provide counselor with a discussion of factors which may effect a client's score.

Profiles

1. Should convey that all occupations and college majors are options for both men and women.
2. Should use the same format for both sexes to convey that both sexes can consider the same career choices.

Fitzgerald, et al., (1974) suggested the need for legislation to eliminate bias in interest inventories. Among other things, she recommends instruments that employ separate test forms based on

sex, provide the same vocational scales, clustering, and occupational choices. Norming of such scales should be on the basis of sex. Inventories utilizing a single test should be normed on a population with a background similar to that of the test-taker.

Stebbins, et al. (1975) have done an in-depth analysis of the guidelines for assessment of sex fairness in career interest inventories that emerged from the National Institute for Education's career education program. The NIE guidelines for assessment of inventories identified two areas in which sex bias can occur: the test items themselves and forms available for administration. With regard to the inventory itself (as opposed to technical procedures and materials, and interpretive materials) the authors make two recommendations: (1) administer inventories only as a part of a total program; (2) use a combined inventory form.

Using a combined inventory to measure the interest of both females and males is perhaps the most controversial aspect of sex fair vocational interest measurement, because of the belief that separate inventories are needed for predictive validity. However, research on this subject does not appear to support such belief. For example, O'Shea, et al. (1974) investigated the usefulness of administering the men's Strong Vocational Interest Blank to women counselor education students, and to compare the interest profiles of male and female counselor education students. The results of the study support the direction that the new SVIB takes. It will have but a single form for women and men. Additionally, it will put greater emphasis on area scales, less on occupational scales. Finally, it will report both male-female norms and separate norms for each sex.

Johansson, et al. (1972) also examined the possibility of a single SVIB inventory. They concluded that the best way to avoid sexual bias in the SVIB is to design one form of the inventory with controls for sex differences. Unfortunately, because occupational sex differences still exist in the real world, some intermediate steps are necessary. Constructing female and male scales predicated on a common item pool and one scale for each occupation with both male and female norms would be a beginning. These steps would facilitate the study of sexual differences in vocational interests.

Rayman (1976) investigated whether sex-balanced items could be written and whether an inventory constructed of these items would measure interests. A research in the study was done on the ACT-IV (American College Testing Interest Inventory) and the resultant Uni-II (Unisex Interest Inventory). The results of the study suggest

that it is possible to construct an interest inventory consisting primarily of sex balanced items. Additionally, sex-balanced items can and do measure interest. There are enough similarities between the ACT-IV and other inventories (occupational, person-in-general) to suggest that findings from this study may be applicable to other inventories.

Prediger, et al. (n.d.) reviewed the evidence related to issues of sex bias in interest inventories. From this review, four principal issues were identified:

1. How does one determine sex bias?
2. Should predictions of occupational preference and entry be used in validating interest inventories?
3. Must interest score reports be sex-restrictive to be valid?
4. Can useful sex-balanced raw score scales be constructed?

Regarding issue number three, it was tentatively concluded that the validity of interest inventories is not lowered through the use of sex-balanced score reports; in several instances, it was increased. Regarding issue number four, it was tentatively resolved that sex-balanced raw score scales can be constructed for interest inventories assessing basic types of interests and that these scales possess several desirable psychometric characteristics.

LEGISLATION

With regard to the world of employment, a variety of federal and state laws and executive orders have been used to open up more occupations to more people. Title VII of the Civil Rights Act of 1964 prohibited discrimination because of race, color, religion, sex, or national origin in all employment practices, including hiring, firing, promotion, compensation, and other terms, privileges, and conditions of employment. The Equal Employment Opportunity Commission (EEOC) was created to administer Title VII and to assure equal treatment for employment.

The Equal Employment Opportunity Act of 1972 greatly strengthened the powers of the EEOC. As amended, Title VII now covers: all private employers of fifteen or more persons; all educational institutions, public and private; state and local governments; public and private employment agencies; labor unions with fifteen or more members; joint labor-management committees for apprenticeship and training.

Executive Order 11246 (as amended by Executive Order 11375) required Affirmative Action Programs by all federal contractors and subcontractors and requires that firms with contracts of a specified amount and a specified number of employees develop and implement written programs.

The Equal Pay Act of 1963 required all employers subject to the Fair Labor Standards Act to provide equal pay for men and women performing similar work. In 1972, coverage of this act was extended to an estimated fifteen million additional employees (U. S. Equal Employment Opportunity Commission, 1974).

The EEOC has held that state laws protective of women in the work force tend to discriminate rather than protect. Accordingly, the Commission has concluded that such laws conflict with Title VII of the Civil Rights Act of 1964 and will not be considered a defense to an otherwise established unlawful employment practice or a basis for the bona fide occupational qualification exemption. The EEOC has amended Chapter XIV of Title 29 of the Code of Federal Regulations to add a new part entitled "Guidelines on Discrimination Because of Sex." The new part covers bona fide occupational qualifications, separate lines of progression and seniority systems, discrimination against married women, job opportunities, advertising, employment agencies, pre-employment inquiries as to gender, and relationship of Title VII to the Equal Pay Act (U. S. Department of Labor, 1970).

Title IX of the Education Amendments of 1972 (U. S. Congress, 1972) mandated that sex discrimination be eliminated in federally assisted education programs. Section 901.(a) reads:

> No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance.

There is a distinction between *affirmative action* and *nondiscrimination*. The latter refers to merely changing practices which have been discriminatory (ceasing to recruit at male schools only). Affirmative action means taking steps to *remedy* a situation based on sex that was caused by past discrimination either by the school or by society at large (sponsoring programs specifically planned to attract female applicants) (Dunkle, et al., 1974).

Title IX was designed broadly to right the wrongs of an educational system that consciously or unconsciously, with or without malice, had for decades patently discriminated against women and girls (Saario, 1976). The extent of the impact of the Title IX prohibition against discrimination in admission to vocational schools is unclear. From state and local surveys it is clear that many localities make vocational training available to more boys than girls and that vocational schools offer male students a much wider range of vocational courses. While Title IX will end sex discrimination in admission to vocational schools and courses, it cannot end the informal school and peer pressures on students to conform to stereotyped vocational roles. But the freedom of females and males to choose their roles will be broadened by the Title (Fishel, et al., 1974).

The Women's Educational Equity Act (WEEA) authorized the support of an extremely broad range of activities that focus on every area of education that promotes sex bias: the development, evaluation, and dissemination of curricula, textbooks, and other educational materials; preservice and inservice training for educational personnel, including guidance and counseling personnel; research development and other educational activities designed to advance educational equity; guidance and counseling activities, including the development of tests which are nondiscriminatory on the basis of sex; educational activities to increase opportunities for adult women, including continuing educational activities and programs for underemployed and unemployed women; and the expansion and improvement of educational programs and activities for women in vocational education, career education, physical education, and educational administration (U. S. Department of Health, Education and Welfare, 1976).

The legislation with the greatest potential for eliminating sex-role stereotyping and sex bias in vocational education is the Vocational Education Act of 1963 as amended by the Education Amendments of 1976 (U. S. Congress, 1976). A declared purpose of the act is to provide means of developing and executing programs of vocational education to overcome sex discrimination and sex stereotyping--including homemaking programs--and thus provide equal educational opportunities in vocational education to persons of both sexes. The Act now requires that women knowledgeable about employment problems of their sex be included on national, state, and local advisory councils. Five-year and annual state plans must set forth policies and procedures that the states will follow to assure equal access to vocational education programs by both men and women. Every contract made by a state for funding exemplary and innovative projects shall give priority to programs and projects designed to reduce sex stereotyping in vocational education. The Act also requires each state

desiring to participate in the Act to assign such full-time personnel as necessary to assist the State Board in fulfilling the purposes of the Act by:

1. Taking action needed to sensitize others to activities in vocational education designed to reduce sex stereotyping in all vocational education programs.

2. Gathering, analyzing, and disseminating data on the status of men and women students and employees in vocational education programs.

3. Developing and supporting actions to correct problems.

4. Reviewing the distribution of grants to assure that women's interests and needs are addressed.

5. Reviewing all vocational education programs in the state for sex bias.

6. Monitoring the implementation of laws prohibiting sex discrimination in hiring, firing, and promotion procedures relating to vocational education.

7. Reviewing and submitting recommendations with respect to the overcoming of sex stereotyping and sex bias in vocational education programs.

8. Assisting local educational agencies and other interested parties in improving vocational education opportunities for women.

9. Making available to appropriate agencies and the general public information developed in carrying out the requirements listed.

In addition to the conditions reported, Congress has, in Section 523, directed the Commissioner of Education to carry out a study of the extent to which sex discrimination and stereotyping exist in vocational education programs assisted under the Vocational Education Act of 1963, and of the progress that has been made to reduce or eliminate such discrimination in vocational education programs and occupations for which these programs prepare students. Subsequently, on May 6, 1977, a Request For Proposal was issued by DHEW/Office of Education to conduct a study of the extent of sex discrimination in vocational education programs and assessment of methods to reduce or eliminate such inequities.

CONCLUSIONS AND RECOMMENDATIONS

Vocational education is both a cause and an effect of sex unfairness; it acts on and is acted on by forces over which it has no influence and forces over which it has some control. It is fairly certain that vocational educators do not maintain such stereotyping and bias in their program out of ulterior motives, but the condition does exist.

As a result of a study of the limited literature available for this paper, I have concluded that certain actions will maximize reduction of sex unfairness in vocational education:

1. *Enforce appropriate laws.* The consequences of violating Title IX, et al., should be certain and swift. Experience with civil rights law enforcement shows that many people need laws as a reason to deviate from a social norm because they are not strong enough or are unwilling to do so on principle alone. Also, as a new practice becomes a part of the culture and people become accustomed to it, outside discipline is replaced with self-discipline. Unused behaviors are eventually extinguished.

2. *Provide covert support.* Each administrator in each state's vocational education hierarchy should make known in no uncertain terms that she or he supports equal opportunity and will not tolerate sex unfairness.

3. *Take affirmative action.* It is absolutely essential that vocational schools and programs take definite steps to change the way that the sexes are dealt with in their preparation for careers. While it is true that success cannot be measured by the number of people enrolling in nontraditional programs, it *must* definitely be measured by the effort expended by vocational educators to promote such enrollment. Vocational education cannot rely on other forces to make its progress.

4. *Provide new models for vocational aspirations.* No opportunity should be lost in using "success" stories to encourage young people to widen their occupational considerations and aspirations. If our young are socialized to accept the proposition that they cannot be successful in certain occupations because of gender, then it will require more than adult reassurance to neutralize this part of the socialization process. Cliché or not, nothing succeeds like success.

5. *Require inservice education for vocational educators.* As with any new practice that really or assumedly violates long-standing tradition, it will be necessary to reassure vocational educators that neither the republic nor vocational education will fall if males and females prepare for and enter nontraditional occupations. It is safe to assume that vocational educators have the best interests of their students at heart and that practices which serve those interests will be followed. Vocational educators also need to be able to recognize the face of sex-role stereotyping and bias if they are to expunge it from their courses, programs, and schools. Inservice education can serve to outline the parameters of sex unfairness.

6. *Re-examine the principles of vocational education.* Many of the principles that undergird vocational education were enunciated by the National Society for the Promotion of Industrial Education and have been with us since the Vocational Education Act of 1917. Nothing in the traditional principles of vocational education explicitly promotes sex unfairness, but neither is there anything that prohibits or discourages it. These principles are a product of the culture in which they were formulated, and that culture accepted the traditional places of males and females.

7. *Disseminate information.* It is especially necessary that vocational educators know what is being done across the nation to eliminate sex unfairness. There is, for example, a dearth of information on what is being done (1) to increase women's participation in decision making in vocational education, or (2) to recruit people as teachers/role models in nontraditional vocational programs.

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